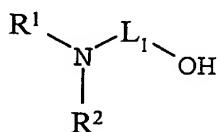


WE CLAIM:

1. An ink jet recording material comprising a support and at least one ink receiving layer containing a water-soluble or water-dispersible polymer, wherein said polymer comprises a repeating monomeric unit having a moiety capable of chelating boric acid by means of at least one nitrogen containing functional group and at least one hydroxyl group thereby forming a five- or six-membered ring.
2. Ink jet recording material according to claim 1 wherein said monomeric unit is represented by formula (I):



(I)

wherein,

R^1 and R^2 are selected independently from the group consisting of hydrogen, a substituted or unsubstituted, saturated or unsaturated aliphatic group, a substituted or unsubstituted aryl group, and a substituted or unsubstituted heteroaryl group;

L_1 represents a linking group containing two or three straight chain carbon atoms which may be further substituted or may be part of a ring;

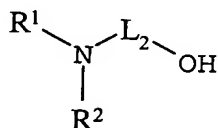
any of L_1 , R^1 and R^2 may combine to form a ring, and

at least one of L_1 , R^1 and R^2 comprises an ethylenically unsaturated polymerizable group.

3. Ink jet recording material according to claim 2 wherein any of L_1 , R^1 and R^2 is substituted by one or more groups comprising one or more additional hydroxyl group, amino groups and amide groups.
4. Ink jet recording material according to claim 1 wherein said polymer comprises at least one other repeating monomeric unit chosen from the list consisting of vinyl acetate, vinyl alcohol, dimethylaminoethyl methacrylate, vinyl amine, vinyl formamide, vinylacetamide, diallyl amine, vinyl versatate, butyral acrylate, styrene, dimethylaminoethyl acrylate, methacryloxyethyltrimethyl ammonium chloride, ethylacrylate, butylmethacrylate, styrene, methyl methacrylate, butyl acrylate,

2-ethylhexyl methacrylate, vinyl amine, diallyldimethyl ammonium chloride, 2-ethylhexyl acrylate, methacryloxyethyldimethylbenzylammonium chloride, acryloxyethyldimethyl benzyl ammonium chloride, vinyl caprolactam and vinyl pyrrolidone.

- 5
5. Ink jet recording material according to claim 1 wherein said polymer is a latex.
- 10
6. Ink jet recording material according to claim 1 wherein said polymer functions as binder.
7. Ink jet recording material according to claim 1 wherein said ink receiving layer further comprises a pigment.
- 15
8. Ink jet recording material according to claim 7 wherein said pigment is an inorganic pigment.
- 20
9. Ink jet recording material according to claim 8 wherein inorganic pigment is chosen from the group consisting of aluminum oxide, boehmite, pseudo-boehmite, gibbsite, bayerite, aluminum hydroxide, silica, clay, calcium carbonate, zirconia, and mixed inorganic oxides/hydroxides.
- 25
10. Ink jet recording material according to claim 1 wherein said ink receiving layer further contains a hardener capable of crosslinking said polymer.
- 30
11. Ink jet recording material according to claim 10 wherein said hardener is boric acid.
- 35
12. An ink jet recording material comprising a support and at least one ink receiving layer containing a water-soluble or water-dispersible polymer, wherein said polymer comprises a repeating monomeric unit represented by formula (II):



(II)

wherein,

R^1 and R^2 are selected independently from the group consisting of hydrogen, a substituted or unsubstituted, saturated or unsaturated aliphatic group, a substituted or unsubstituted aryl

group, and a substituted or unsubstituted heteroaryl group;
L₂ represents a linking group containing two or three carbon
atoms which may be further substituted or may be part of a ring;
any of L₂, R¹ and R² may combine to form a ring, and
5 at least one of L₂, R¹ and R² comprises an ethylenically
unsaturated polymerizable group.

13. Ink jet recording material according to claim 12, wherein L₂ is
selected from the group consisting of -CH₂CH₂-, -CH₂CH₂CH₂-,
10 -CH₂CH(CH₃)-, -CH(CH₃)CH₂-, -CH₂CH(CH₂OH)-, -CH(CH₂OH)CH₂-,
-CH=CH-, -CH=CHCH₂-, -C≡CCH₂-, -CH₂CH=CH-, -CH₂C≡C-, -CH=C(CH₃)-
and -C(CH₃)=CH-.

14. Ink jet recording material according to claim 12 wherein any of
15 L₂, R¹ and R² is substituted by one or more groups comprising one
or more additional hydroxyl group, amino groups and amide
groups.

15. Ink jet recording material according to claim 12 wherein said
20 polymer comprises at least one other repeating monomeric unit
chosen from the list consisting of vinyl acetate, vinyl alcohol,
dimethylaminoethyl methacrylate, vinyl amine, vinyl formamide,
vinylacetamide, diallyl amine, vinyl versatate, butyral
acrylate, styrene, dimethylaminoethyl acrylate,
25 methacryloxyethyltrimethyl ammonium chloride, ethylacrylate,
butylmethacrylate, styrene, methyl methacrylate, butyl acrylate,
2-ethylhexyl methacrylate, vinyl amine, diallyldimethyl ammonium
chloride, 2-ethylhexyl acrylate, methacryloxyethyldimethyl-
benzylammonium chloride, acryloxyethyldimethyl benzyl ammonium
30 chloride, vinyl caprolactam and vinyl pyrrolidone.

16. Ink jet recording material according to claim 12 wherein said
polymer is a latex.

35 17. Ink jet recording material according to claim 12 wherein said
polymer functions as binder.

18. Ink jet recording material according to claim 12 wherein said
ink receiving layer further comprises a pigment.

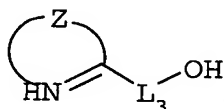
40 19. Ink jet recording material according to claim 18 wherein said
pigment is an inorganic pigment.

20. Ink jet recording material according to claim 19 wherein inorganic pigment is chosen from the group consisting of aluminum oxide, boehmite, pseudo-boehmite, gibbsite, bayerite, aluminum hydroxide, silica, clay, calcium carbonate, zirconia, and mixed inorganic oxides/hydroxides.

21. Ink jet recording material according to claim 12 wherein said ink receiving layer further contains a hardener capable of crosslinking said polymer.

22. Ink jet recording material according to claim 21 wherein said hardener is boric acid.

23. An ink jet recording material comprising a support and at least one ink receiving layer containing a water-soluble or water-dispersible polymer, wherein said polymer comprises a repeating monomeric unit represented by formula (III):



wherein,

Z represents the necessary atoms to form a substituted or unsubstituted five- or six-membered heteroring;

L₃ represents a linking group containing one or two carbon atoms which may be further substituted or may be part of a ring, and at least one of the heteroring or L₃ comprises an ethylenically unsaturated polymerizable group.

24. Ink jet recording material according to claim 23, wherein L₃ is selected from the group consisting of -CH₂CH₂-, -CH(CH₃)-, -CH=CH- and -C≡C-.

25. Ink jet recording material according to claim 23 wherein L₃ is substituted by one or more groups comprising one or more additional hydroxyl group, amino groups and amide groups.

26. Ink jet recording material according to claim 23 wherein a hydrogen atom of L₃ is replaced by a substituted or unsubstituted, saturated or unsaturated aliphatic group, a

substituted or unsubstituted aryl group, and a substituted or unsubstituted heteroaryl group.

27. Ink jet recording material according to claim 23 wherein said
5 polymer comprises at least one other repeating monomeric unit
chosen from the list consisting of vinyl acetate, vinyl alcohol,
dimethylaminoethyl methacrylate, vinyl amine, vinyl formamide,
vinylacetamide, diallyl amine, vinyl versatate, butyral
acrylate, styrene, dimethylaminoethyl acrylate,
10 methacryloxyethyltrimethyl ammonium chloride, ethylacrylate,
butylmethacrylate, styrene, methyl methacrylate, butyl acrylate,
2-ethylhexyl methacrylate, vinyl amine, diallyldimethyl ammonium
chloride, 2-ethylhexyl acrylate, methacryloxyethyldimethyl-
benzylammonium chloride, acryloxyethyldimethyl benzyl ammonium
15 chloride, vinyl caprolactam and vinyl pyrrolidone.
28. Ink jet recording material according to claim 23 wherein said
polymer is a latex.
- 20 29. Ink jet recording material according to claim 23 wherein said
polymer functions as binder.
30. Ink jet recording material according to claim 23 wherein said
ink receiving layer further comprises a pigment.
- 25 31. Ink jet recording material according to claim 30 wherein said
pigment is an inorganic pigment.
- 30 32. Ink jet recording material according to claim 31 wherein
inorganic pigment is chosen from the group consisting of
aluminum oxide, boehmite, pseudo-boehmite, gibbsite, bayerite,
aluminum hydroxide, silica, clay, calcium carbonate, zirconia,
and mixed inorganic oxides/hydroxides.
- 35 33. Ink jet recording material according to any of claims 23 wherein
said ink receiving layer further contains a hardener capable of
crosslinking said polymer.
- 40 34. Ink jet recording material according to claim 33 wherein said
hardener is boric acid.